Sex-selective Abortions and Fertility Decline: The Case of Haryana and Punjab

September 2001

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Preface

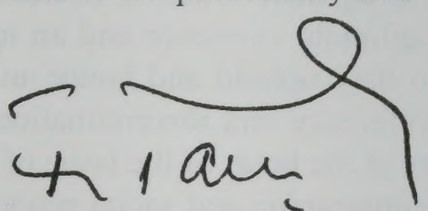
How do communities achieve their fertility objectives and at what social and human rights cost? How do they make use of increasingly sophisticated, accessible and affordable technology and at what level of ethical and gender bias tolerance? How do they define development and quality of life without compromising the essence of equity and equality when it comes to the rights of the female foetus and the girl child to a legitimate existence and an unquestionable family, social and human recognition? How do they uphold and honor an equitable value system whose very premise is all but son preference and discrimination against the girl child? These questions and many others are at the heart of the issue of sex selective abortion, which ironically cuts across a macro demographic and social economic ideal and a gender-biased, self-defeating perception of individual family happiness.

The findings of the second National Family Health Survey (NFHS-II) in 1999 had pointed to a significant fertility decline in a number of states without the evidence of a substantial increase in contraceptive use. India is indeed one of the few countries to have legalized induced abortion under the Medical Termination Pregnancy Act in 1972. Abortion is legal in instances where pregnancy carries the risk of grave injury to woman's physical and/or mental health endangers her life or when it is the result of contraceptive failure or rape, etc. However, the fact that abortion services are being provided on demand by an increased number of unregistered service providers, non-allopathic practitioners, paramedics and others, and the estimates that nearly six million abortions are performed every year *outside the ambit of the Act*, and that the sex ratio at birth and during the first few years of life suffers from a significant under representation of females, all of that prompted the very serious question as to the extent to which families with a strong son preference and keen on having fewer children were resorting to sex-selective abortions.

The present study was first commissioned by UNFPA last year with the objective of ascertaining the determinants of recent fertility decline in the states of Haryana and Punjab, two States with the most adverse sex ratio. It drew on the data of NFHS-II and the Sample Registration System and devised an indirect methodology to account for the magnitude of total abortions, the proportion of sex selective abortions to total abortions, and the impact on fertility. It highlighted the extent to which sex selective abortion had an impact on fertility rates and how son preference perversely led to fertility decline.

At the conclusion of the study, the UNFPA Delhi office immediately convened a brainstorming meeting in March 2001, in Delhi. The meeting, attended by selected government departments and non-governmental organizations, discussed the preliminary version of the report and suggested broad and concrete intervention strategies to address the issue of sex selective abortions in the country. It also recommended restructuring and modifications of the preliminary report to make it more policy relevant and reader friendly. As a result, the present report has been prepared and Section 4 on Policy implications was added and substantively reflected the discussions and the deliberations of the brainstorming meeting. It also documented the framework of interventions, which should include four interdependent elements at the advocacy, legal system, service delivery and research levels. It is our most sincere hope that this revised publication will stimulate further research on this most abhorrent practice and will inform the necessary policies, programmes and actions to ensure its complete elimination.

I wish to acknowledge the merit of the UNFPA Consultant, Dr. M. L. Srivastava, in carrying out and revising this well researched study and the valuable contribution of Dr. Dinesh Agarwal, UNFPA Technical Advisor, in the finalization of the preliminary and present reports.



Francois M. Farah
UNFPA Representative

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SUMMARY AND POLICY IMPLICATIONS

SUMMARY OF FINDINGS

Objective:

The present report examines the significance of sex-selective abortions as well as total abortions on the level and pattern of decline in fertility in Haryana and Punjab, the two contiguous states in northern India, between 1990-92 and 1996-98. The National Family Health Survey is the main source of data. The Sample Registration System provides supplementary source of data.

Fertility Decline:

The total fertility rate (TFR) per female aged 15-49 years) in Haryana was 4.0 during 1990-92 and declined to 2.9 during 1996-98, a fall of 28 per cent. The comparable TFR figures for Punjab were 2.9 and 2.2 representing a decline of 24 per cent. The relative decline in fertility was higher among women aged 30+ years than among those aged less than 30. The declines in TFR in rural and urban areas of Haryana and in urban areas of Punjab were almost similar at about 28 per cent. The rural areas of Punjab showed a decline of about 22 per cent.

Methodology:

The database to study levels and patterns of induced abortions in India is quite poor. The reported figures from official sources and surveys are gross under-estimates of ground realities. In general the study of induced abortions in India, including the present one, rely on indirect estimates combined with consistency checks.

Given the available database (NFHS-I & II, SRS), the present report attempts to arrive at realistic estimates of speci+fied types of induced abortions. The female-child-selective induced abortions are estimated with the help of Index of Sex Discrimination at Birth (ISDB) and the relationship between the missing number of girls at birth and the number of induced abortions. The proximate variable model developed by Bongaarts and Potter has been utilized to estimate the level of total abortion rate per female. For comparative purposes, female selective as well as total induced abortions are summarized in terms of abortion rate per 1000 females aged 15-49 years and abortion ratio per 100 live births.

Preference for Sons:

Haryana and Punjab are among the states showing the greatest preference for sons and sex selection at birth. This is generally stronger in urban than in rural areas, and among literate as compared to illiterate women. Sex selection at birth is substantial at lower levels of fertility. This selection is observed since 1971, when data from the Sample Registration System became available. Its magnitude has become substantial in the 1990s. Data for 1996 and 1997 show a deficiency of about 8 to 10 per cent in female births. The high level of sex selection at birth is linked to the wide prevalence of sex selective abortions.

The preference for a son generally rises with the number of children born and age of wife. The preference to have the first son, substantially stronger in Punjab (SRB=131) than in Haryana (SRB=109), stands out as an exception to this observation. This is most probably the reflection of the aspirations of younger couples to attain preferred sex composition within small-family norm. The preference appears to be more in urban than in rural areas for first, third, and higher order births in Punjab. By contrast, it is limited to second order births in Haryana. For larger families, rural areas show greater preference for sons than urban areas. The probability of having an additional child in families dominated by sons is lower than that in families dominated by daughters.

It is also interesting to note that preference for a son following the birth of a daughter is quite strong both in Haryana (SRB=151) and Punjab (SRB=154). However, in Haryana the desire for a son still remains high following the birth of a son (SRB=120) but this is not so for Punjab (SRB=98). These findings clearly indicate that the son-preference factor continues to play a significant role even in subsequent pregnancies especially in the state of Haryana. Analysis further indicates that with the notable exception of urban areas in Punjab, preference for a son is stronger for each level of birth order in Haryana as compared to Punjab.

Another important parameter relates to birth interval. The rising trend in SRB following the birth of a daughter with increase in the duration of birth interval (BI) can be assumed as a deliberate attempt to have a son. In the case of Haryana, the SRB rises from 112 for birth interval less than 24 months to 207 for birth interval 36 or more months. The comparative values for Punjab were 134 and 187 respectively. The lower preference for sons following the birth of a son in Punjab as compared to Haryana is the reflection of the lower family size norm prevailing in Punjab compared with Haryana.

Induced Abortions:

The Medical Termination of Pregnancy (MTP) Act passed in April 1972 liberalized the use of abortion in India. Abortion is legal in instances when pregnancy carries the risk of grave injury to a woman's physical and / or mental health, endangers her life, or when it is the result of contraceptive failure or rape etc. The Act was intended to reduce maternal mortality and morbidity due to illegal abortions. There is no agreement among scholars on the number of induced abortions that take place in India. The legal abortions recorded

are gross under-estimates and are estimated to comprise only about 10 per cent of the actual total. The Shah Committee (1966) had estimated an annual incidence of 6.5 million abortions indicating three-fifths or 3.9 million to be induced and two-fifths or 2.6 million to be spontaneous. The assumption was that for every 73 live births, there are two still births and 25 abortions. Of the latter, 15 are induced and 10 spontaneous abortions. The present study shows the possibility of a rise in the incidence of induced abortions in recent times.

Abortion and Contraceptive Use:

Abortion is more widespread among contraceptive users than among women who have never practiced family planning. The reason probably lies in the fact that women who use contraception other than sterilization do not want to become pregnant, and are more likely than non-contraceptive users to terminate a pregnancy. The incidence of induced abortion, however, is inversely related to the extent of use of sterilization.

Induced Abortion and Fertility Decline:

Induced abortion has played an important role in fertility decline in urban areas of Haryana and rural as well as urban areas of Punjab. In urban areas of Haryana, it accounted for about one-third of decline in TFR whereas in rural and urban areas of Punjab it accounted for about 50 and 80 per cent of fertility decline, respectively. Between 1990-92 and 1996-98, the incidence of induced abortion declined in Haryana and increased in Punjab. As per the analysis, the annual number of induced abortions in Haryana and Punjab in 1990-92 was about 101,000 and 137,000 respectively. According to the same analysis, the number of induced abortions in 1996-98 in Haryana is estimated at 77,000 and that in Punjab at about 194,000

The TFR in Haryana in 1996-98 would have been 3.2 instead of 2.9 if there were no abortions. In 1996-98, the gain in TFR in the absence of abortions in Punjab would have been quite substantial from 2.2 to 2.9. Relative impact of total abortion on TFR in rural areas is much lower than that in urban areas of each state. Also, its level in Haryana is lower than that in Punjab. The TFR in 1996-98 in urban Haryana in the absence of abortions would have been 3.1 instead of 2.3, a difference of 0.8 births. On the other hand the TFR in urban Punjab in that year would have been 3.0 instead of 1.8, a difference of 1.2 births per female .

Induced Abortion and Sex Selection at Birth:

The availability of technology for sex detection of the unborn child and the motivation of couples to have sons within the frame of small-family norm, appears to have affected substantially the incidence of sex-selective abortions in Haryana and Punjab. As per the analysis , sex-selective induced abortions in Haryana in 1990-92 stood at 69,000 and that in Punjab at 57,000. These constitute 68 per cent and 42 per cent of all induced abortions respectively. The estimated number of sex-selective abortions in 1996-98 in Haryana and Punjab was 62,000 (81 per cent of total abortions) and 51,000 (26 per cent of total

abortions). During the period 1990-92 and 1996-98, rural areas of each state registered a decline in the number of sex-selective abortions. By contrast, the urban areas registered the opposite, the increase in the case of Haryana was almost five times compared to an increase of only 18 per cent in Punjab.

The overall impact of sex-selective abortions on total fertility rate in Haryana and Punjab during 1990-92, at about 8 per cent in each, is somewhat lower than that during 1996-98, at 10 per cent in Haryana and 9 per cent in Punjab. If there were no sex-selective abortions, the overall TFR in Haryana, in 1996-98 would have been 3.2 instead of 2.9 and that in Punjab would have been 2.4 instead of 2.2. The rural areas of each state show a decline in the relative impact of sex-selective abortions on TFR over this period whereas urban areas show the reverse. Further, in 1996-98 as compared to 1990-92, only the urban areas show a substantial gain and a high relative impact of sex-selective abortions on TFR. The TFR in urban areas of Haryana in 1996-98 would have been 2.8 instead of 2.3 births per woman if there were no sex-selective abortions. By contrast, the gain in TFR for Punjab would have been only 0.2 (from 1.8 to 2.0) births per woman. These findings clearly indicate that son preference is strongly rooted in the psyche of the urban population of these two states and also, that access to facilities encourages couples to go in for sex selective abortion.

One needs to draw solace from the observation that the practice of resorting to sex-selective abortion in the rural areas of both states is declining. In urban areas, particularly in Haryana, the incidence of sex-selective abortions increased with the passage of time.

The sex-selective and total abortions, in the final analysis, lower the total fertility rate in a population. These are, however, regulated by different and opposing social norms and legal framework. Whereas sex-selective abortion is discouraged legally, the total abortion is accepted and legally permitted. However, individual preferences may at times over-ride the other considerations. This may be noted in the case of Haryana and Punjab.

In the context of total abortions, Haryana and Punjab showed opposing patterns. Except for a marginal rise in urban areas, Haryana showed a decline in the incidence of total abortions both in terms of numbers and rates. Rural as well as urban areas in Punjab show a rise in this incidence.

Policy Implications:

The findings emerging from this analysis require policy and programmatic responses. The extensive practice of sex selective abortion, as documented here, is a chilling indicator of gender discrimination and the unequal status of women in society. Ever since the publication of census 2001 provisional reports, highlighting decline in child sex ratio, there has been lot of concerns articulated by the policy and programme managers, media , religious leaders, women's group regarding abominable practice of sex selective abortions and social distortions likely to be witnessed in future.

This study also estimates the magnitude of abortions, showing an overwhelming majority of them being sought from illegal sources. Although the study limits itself to Haryana and Punjab, two states with known high incidence of sex-selective abortion, a preliminary review of recent data for other states in India indicates that this problem may be much more wide spread than just these two states. The most important fact brought out by the study is that a substantial proportion of the decline in fertility between the two NFHS surveys was due to recourse to sex-selective abortion.

To attack the growing problem of sex selective abortions, the following steps should be taken, at a minimum:

1. Reproductive health communication and education should include specific messages highlighting the importance of girl children, gender equality, the hazards of unsafe abortions and the illegality of pre-selection of sex followed by abortion.

2. Statutory laws, e.g. the MTP Act (1972) and the Prenatal Diagnostic Techniques, Regulation and Prevention of Misuse Act (1994), need to be strictly enforced. Existing loop holes should be plugged in light of new technological developments. Appropriate authorities set up under the act should be more proactive in implementing provisions of the act. Law-enforcing agencies, in partnership with community-based groups, and social service organizations, should take measures to identify offenders and proceed with a logical follow up in the court of law.

3. Advocacy initiatives should be aimed to build up alliances among all partners for social mobilization to eliminate this practice and to also facilitate implementation of laws. Professional associations should be seen as an important partners for self regulation and also bringing peer pressure on those who continue to violate provisions of the act.

1. INTRODUCTION

1.1 Background

The state programs in India, since the early 1950s, have promoted measures to limit family size and thereby lower overall fertility in the population. This lowering in fertility could be achieved through wide spread contraceptive use and / or induced abortions. The use of contraceptives was allowed since the inception of the family planning program in the early 1950s. The use of abortion was legalized from April 1972 as a backup in case of contraceptive failure, among other reasons. However, the Prenatal Diagnostic Techniques, Regulation and Prevention of Misuse Act (1994) does not permit diagnosis of sex of growing foetus.The use of contraceptives is encouraged whereas that of induced abortion is allowed only in specified situations as laid down in the act.

Despite the general observation that the use of spacing methods of contraception, with early abortion as a backup, is conclusively the safest reversible regimen of fertility regulation at any age (Tietze and Henshaw, 1986), latter has never been encouraged as a method of fertility control. However, its widespread use to achieve preconceived socio-demographic goals, like preference for sons within a small family-size norm, will tend to affect over all fertility.

Notable declines in fertility between 1990-92 and 1996-98 in Haryana and Punjab, revealed by the reports of the recently completed National Family Health Survey (NFHS-2), has prompted the need to examine the role of the practice of induced abortion in this transition. The present study is relevant because traditionally these two states have shown strong preference for sons, leading to the practice of induced abortions. Studies have demonstrated the practice of sex selective abortion and sex discrimination in child-care at very young ages in the two states under review here (Arnold et. al., 1998; Das Gupta and Bhat, 1997; Mutharayappa et. al., 1997; Nair, 1996; Narasimhan, 1997; Vlassoff, 1980, 1990, 1991 among others).

The present report explores the link between fertility decline and incidence of induced abortion, particularly the sex-selective abortions, in Haryana and Punjab. The report presents a literature review to high light the issue of fertility decline, the sex discrimination at birth and early in life, and practice of sex selective abortions. The results of the study are discussed in a separate section. A summary of the findings and its policy implications are presented in the beginning of the report.

1.2 Objectives

In the context of Haryana and Punjab, the objectives of the present study are to conduct a study on sex selective abortions as a factor contributing to fertility decline. Study also examines the impact of total induced abortions on fertility decline. The main goal of this study is to see if this practice of sex selective abortions could be considered as a significant factor in fertility decline in these states.

2. LITERATURE REVIEW

The review covers selected studies which assess the magnitude of fertility decline in Haryana and Punjab, the sex preference at birth, and the link between fertility decline and sex selective abortions.

2.1 Fertility Decline

Total fertility rate (TFR), interpreted as the number of children a woman would have by the end of her reproductive life if she were to experience the age-specific fertility rates of the period under study, is a comprehensive and convenient measure of the level of fertility in a population. This TFR may not be experienced by a specific cohort and can be misleading indicator of completed fertility when the level and timings of birth are rapidly changing in the population (Wilson, 1985). However, in practice, it is extremely useful for comparative analysis. For ease of comparison in this study the TFR is subdivided into two parts referring to age segments 15-29 and 30-49 years. These rates are respectively designated TFR (15-29) and TFR (30-49).

The NFHS data summarized in Table 1 show substantial decline in total fertility rate in Haryana and Punjab between 1990-92 and 1996-98. The TFR (15-49) in Haryana declined by 28 per cent from 4.0 to 2.9 whereas that in Punjab registered a fall of 24 per cent from 2.9 to 2.2. The relative decline was more in the age group 30+ years than in 15-29 years. The differential decline in fertility by age varied somewhat by states, in Punjab 34 per cent and 22 per cent and in Haryana 32 per cent and 27 per cent respectively. Figure 1 shows that fertility rate in each five-year age group in Haryana and Punjab declined between 1990-92 and 1996-98.

Rural / urban differential in fertility decline is noted only in Punjab where TFR (15-49) years declined by 28 per cent in urban areas and by 22 per cent in rural areas. In the case of Haryana each area showed a decline of about 28 per cent. Urban areas of Punjab consistently showed greater relative decline in fertility than rural areas in age groups 15-29 years and 30+ years with wider differential in the former than in the latter age group. This pattern is not noted in Haryana where urban areas showed greater decline in fertility of younger women than rural areas. The reverse is noted for older women with a very wide margin.

The Sample Registration System (SRS) data (Table 1), by and large, confirm the pattern of decline in TFR (15-49) shown by NFHS data but at approximately one-half of the level shown by the latter. The declines in TFR (15-49) in Haryana and Punjab from SRS data were only 14 per cent and 13 per cent respectively. The two sources confirm a greater relative decline in fertility of older than younger women. However, the differential in the decline by age revealed by the two-source follow an opposite trend. SRS data, like NFHS data, show greater relative decline in fertility of older women, but

the differential is much wider in Haryana and narrower in Punjab. In comparison to NFHS data, SRS data show a much wider differential in relative decline of TFR (15-49) in urban and rural areas of Punjab. In the case of Haryana, the substantially greater relative decline in fertility of older women in rural areas shown by NFHS is confirmed by SRS. In this context it is worth mentioning that the two sources provided almost similar estimate of TFR (15-49) for Haryana and Punjab during 1990-92 but not during 1996-98. For Haryana the TFR (15-49) during 1996-98 estimated from NFHS at about 2.9 was much lower than that from SRS at 3.4. A similar difference is noted for Punjab where the respective estimates are 2.2 and 2.7. Such a wide gap between the estimates of TFR from two sources in 1996-98 needs adequate evaluation and reconciliation. Despite these differences, the consistency of the trend shows a definite decline in fertility in Haryana and Punjab between 1990-92 and 1996-98.

A study using data from NFHS for nine major states, (Andhra Pradesh, Bihar, Gujarat, Haryana, Madhya Pradesh, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh), noted that the declines in fertility in Haryana and Punjab were higher than that in other states (Mari Bhat (2000). Further, the fall in fertility in Haryana and Punjab, for the age group 15-29 years from NFHS data was the highest among the nine states considered. Of the nine states only four, namely Bihar, Haryana, Punjab and Uttar Pradesh, showed wide differential between declines in TFR (15-49) estimated by NFHS and SRS. The declines in fertility given by NFHS for Bihar and Uttar Pradesh were not consistent with changes in distribution of births by birth order and in contraceptive use. The declines in the case of Haryana and Punjab, however, were found to be consistent with increases in contraceptive use and in the proportion of first order births and fall in the proportion of fourth or higher order births.

The present analysis considers the fertility decline in Haryana and Punjab as given by NFHS-1 and NFHS-2 and attempts to isolate the contribution of induced abortion as well as sex-selective abortion in this decline. The results of SRS are used to supplement the information from NFHS to arrive at meaningful interpretation of the findings.

2.2 Preference for sons

A preference for sons over daughters in India is quite well known. This preference is strong in northern and central Indian states, including Haryana and Punjab, and is caused mainly due to economic, social and religious utility of sons (Mutharayappa et. al., 1997, Arnold et. al., 1998, Vlassoff, 1980, 1990 among others). Social and religious utility considerations appear to outweigh the effect of economic utility of sons. The lesser importance of economic reason for son preference was noted in rural Punjab. "Sex bias in Punjabi society seems to be determined more by the structure of rights of asset ownership and decision-making, which severely restricts women from providing economic and other support to their parents. Thus cultural factors are translated into economic considerations" (Monica Das Gupta, 1987). In rural Maharastra, Vlassoff (1980) also noted similar phenomenon where cultural factors, though not adequately defined, were as strong as economic factors. The lineage and religious concerns were most often mentioned as reasons for having a son.

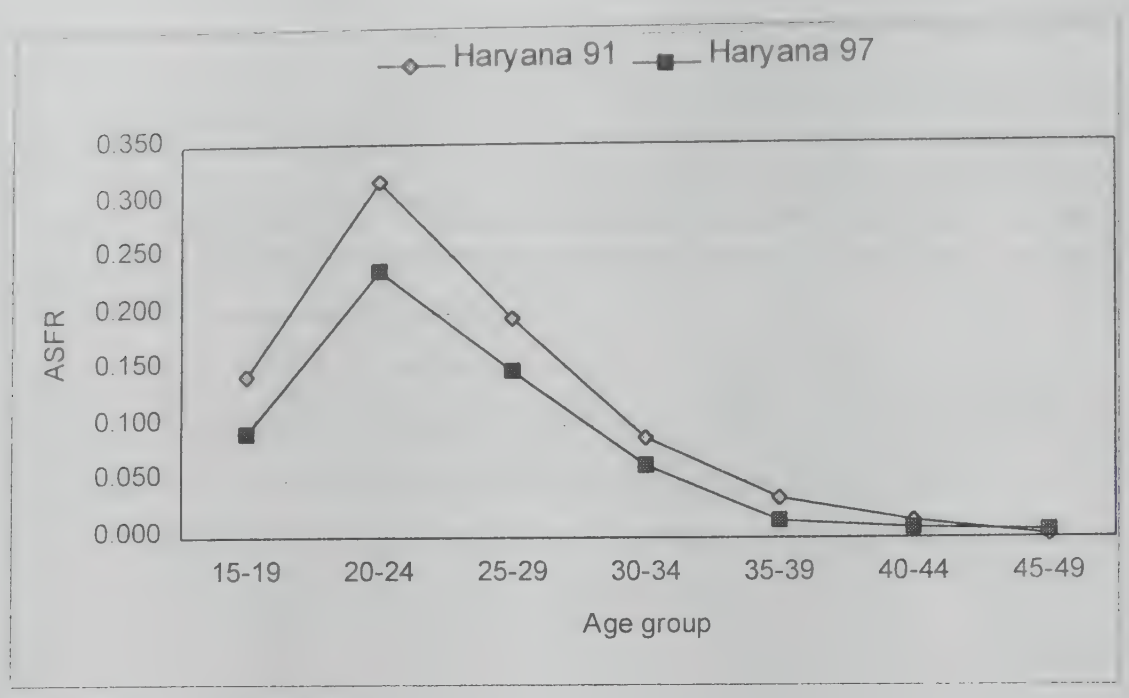
Table 1: Total fertility rate (TFR) per female by age group and rural / urban residence from NFHS and SRS, Haryana and Punjab, specified years

State/Age group	Urban		Rural		Total		Percent change		
	FHS-1 1990-92	NFHS-2 1996-98	NFHS-1 1990-92	NFHS-2 1996-98	NFHS-1 1990-92	NFHS-2 1996-98	Urban	Rural	Total
HARYANA									
TFR (15-29)	2.65	1.85	3.50	2.61	3.28	2.40	-30.2	-25.3	-26.9
TFR (30-49)	0.49	0.40	0.81	0.52	0.71	0.48	-17.5	-35.8	-32.4
TFR (15-49)	3.14	2.25	4.32	3.13	3.99	2.88	-28.3	-27.6	-27.8
PUNJAB									
TFR (15-29)	2.06	1.52	2.55	2.06	2.42	1.88	-26.5	-19.2	-22.2
TFR (30-49)	0.42	0.27	0.54	0.37	0.50	0.33	-34.9	-31.8	-34.0
TFR (15-49)	2.48	1.79	3.09	2.42	2.92	2.21	-27.8	-21.7	-24.3
	SRS 1991	SRS 1997	SRS 1991	SRS 1997	SRS 1991	SRS 1997	Urban	Rural	Total
HARYANA									
TFR (15-29)	2.34	2.10	3.18	2.83	2.99	2.67	-10.4	-11.0	-10.8
TFR (30-49)	0.62	0.57	1.07	0.80	0.97	0.74	-8.8	-25.3	-23.1
TFR (15-49)	2.96	2.66	4.26	3.64	3.96	3.41	-10.1	-14.6	-13.8
PUNJAB									
TFR (15-29)	2.21	1.75	2.46	2.23	2.39	2.10	-20.7	-9.5	-12.1
TFR (30-49)	0.63	0.41	0.77	0.69	0.73	0.62	-33.8	-10.3	-15.2
TFR (15-49)	2.83	2.17	3.23	2.92	3.12	2.72	-23.6	-9.7	-12.9

Note: For comparative purposes the periods 1990-92 and 1996-98 are considered centered around 1991 and 1997 respectively.

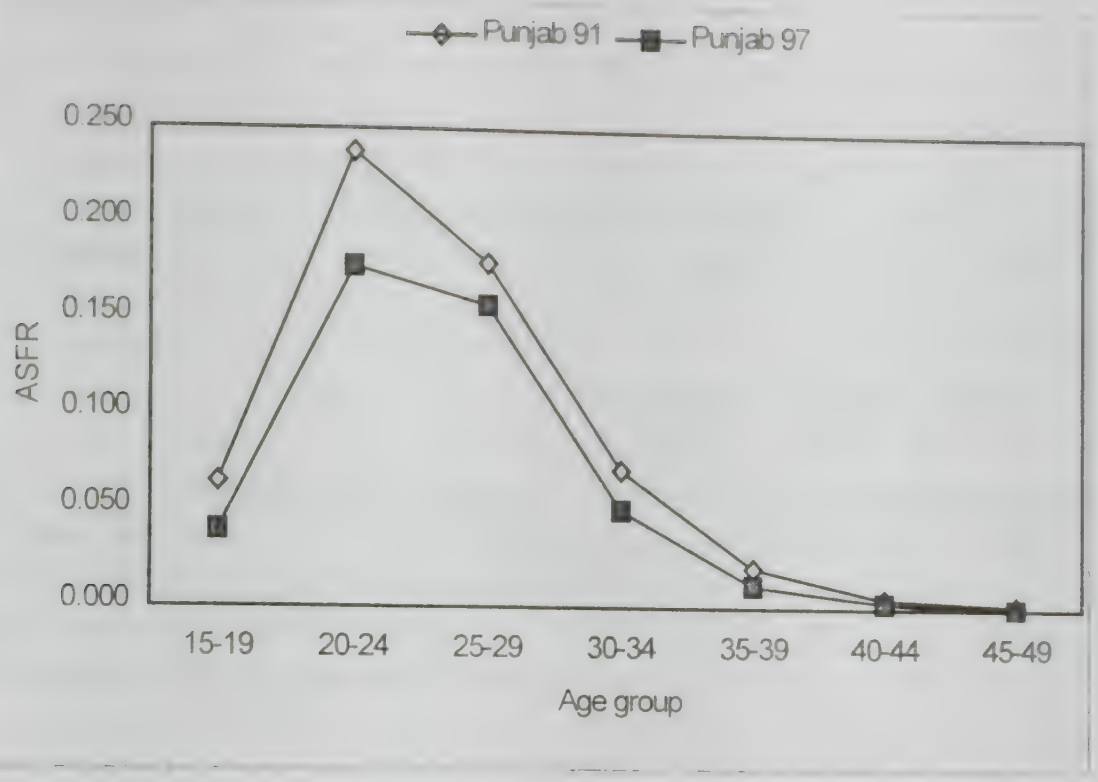
Source: Derived from NFHS-2 (2000) Haryana , Punjab and Registrar General, India (1999).

Figure 1: Age-specific fertility rates per female (ASFR) from NFHS data, Haryana and Punjab, 1991 (1990-92), 1997 (1996-98).



The effect of the sex preference at birth is pronounced in countries like India that are in the middle of the fertility transition. In the beginning and toward the end of the transition the effect of son preference on fertility has been observed to be weak. Even in low fertility populations the preference can be problematic in the sense that it can distort the sex balance between births through selective abortion as has happened in some countries. In the states of Haryana and Punjab, the study of NFHS-1 data has revealed a very strong preference for sons. Several characteristics highlight this preference. The ratio of ideal number of sons to daughters was found to be 1.6 and 1.7 in Haryana and Punjab respectively. The highest value for the ratio was 1.8 for the state of Gujarat. The excess of female child mortality over that of male shown by Haryana and Punjab were 135 per cent and 81 per cent respectively. All other states showed lower values with the closest lower being 70 for the state of Uttar Pradesh. The preference for sons has been noted to be stronger in urban than in rural areas, with a few exceptions. Surprisingly, the son preference was stronger for literate than for illiterate women (Arnold et. al., 1998).

A study of fertility decline and increased manifestation of sex bias in India observes that " parity-specific discrimination becomes more pronounced at lower levels of fertility" (Monica Das Gupta and Mari Bhat 1997). This "intensification effect" is more the result



of motivation than any demographic reality of birth dynamics and could be responsible for higher sex selective abortions when the sex of the unborn foetus is known to be female. A recent study using NFHS-1 data, has shown that "smaller families have a significantly higher proportion of sons than larger families" and " socially and economically disadvantaged couples and couples from the northern region of India not only want but also attain a higher proportion of sons" (Clark 2000). The large numerical deficiency of female children in the two states points to the possibility of female discrimination even before birth and may be considered to imply wide prevalence of sex selective abortions.

An analysis of the imbalance of sex ratio of children in India and 16 of the states given by 1991 Population Census revealed that Haryana showed the highest female mortality disadvantage in the country for children aged under 1 year, 1-4 years and the combined group under 5 years. Punjab showed the second highest female mortality disadvantage for children aged 1-4 years,. Because of very low mortality discrimination index against females aged under 1 year, Punjab ranked fifth among the 16 states considered for females aged less than 5 years (Nair, 1996). As a result of high discrimination against female children, the states of Haryana and Punjab showed the highest percentage of missing female children aged 0-6 years in the 1991 census (9.48 and 9.89 per cent). Similar disturbing observations are noted from the preliminary results of the 2001 Population Census of India. Of all the states and union territories considered, Punjab showed the largest deficit of females in the age group 0-6 years. Haryana followed it. Females per 1000 males aged 0-6 years in Punjab and Haryana were 793 and 820 respectively.

Despite preference for sons, it appears that people's attitude towards number of children has been changing over time. A study of Satara district of Maharastra noted a major shift downward over the 12 years (1975-1987) in women's readiness to keep on bearing children until they had a son. In 1975, only two per cent of the respondents said they would stop at two or fewer children; in 1987, 61 per cent said they would do so. Whereas nearly one-third of the 1975 cohort said they would continue indefinitely until they had borne a son, none of the later group were prepared to do this (Vlassoff, 1991). This shift in people's attitude in conjunction with preference for sons is quite favorable for increase in sex-selective abortions.

2.3 Practice of Sex selective abortions

Abortion and infanticide are two of the oldest and most wide-ranging practices (Sauer, 1978; ICMR, 1989). Although both were condemned in all civilized societies and religions almost from their origin, both seem to be a part of the human history. Abortion was more frequent than infanticide (Sauer, 1978). As comparatively safe abortion became more widely available, the resort to infanticide became less and less necessary. Major reasons for abortion were shame of illegitimacy and poverty until late in the century.

In the context of abortions in India, 1971 is an important date when the Indian Parliament passed The Medical Termination of Pregnancy (MTP) Act, which was implemented from 1 April 1972. Prior to this, induced abortion was a criminal offence under the Indian Penal Code with severe punishment extending to life imprisonment in extreme cases. The MTP Act " simultaneously decriminalized and medicalised the procedure…in the interest of women's well being" (Chhabra 1996). The MTP services under the Act were liberalized in cases where pregnancies could cause grave injury to woman's physical and/or mental health, danger to her life, or were the result of contraceptive failure or the result of rape etc. Maternal mortality due to illegally induced abortion in India, like any other developing countries, was quite high. Thus the Act was to improve the accessibility and availability of scientifically approved services and facilities for induced abortion in properly screened cases, and thereby checking illegal induced abortions and reducing maternal mortality and morbidity (ICMR, 1989). Subsequent technological advances made in the area of sex detection of the foetus necessitated appropriate response to regulate use of diagnostic techniques. Thus, the Prenatal diagnostic Techniques, Regulation and Prevention of Misuse (PNDT) Act, 1994, passed by the Indian Parliament banned the prenatal diagnosis of sex of foetus.

Induced abortion, however, is not practiced across the board in India. Most abortion seekers are generally aged less than 30 years, have at least 2 or 3 living children and are illiterate (Chhabra, 1996; ICMR 1989). Abortion seekers either failed to use contraception or had a contraceptive failure. This profile led to the belief that the abortions could be interpreted as unmet need for contraceptives. No mention was made that this could have been resorted to have a child of a particular sex (Chhabra, 1996). The main reasons for seeking abortion are financial strain, poverty and social reasons like being unmarried, widowed or separated. These reasons appear responsible for wide

prevalence of illegal abortions performed by local *dais* and non-medical persons that cause a high incidence of maternal mortality and morbidity (ICMR 1989).

India lacks a good database concerning the type of abortions, the method used for abortion, duration of pregnancy at the time of abortion and maternal mortality following induced abortions (ICMR, 1989). This situation, even after the MTP Act, does not appear to have improved partly because the Act guarantees that all information about MTPs should be treated as strictly confidential and partly because of social reasons which force people to hide information. One significant attempt to provide some useful data on abortion was made by ICMR which conducted a survey to study the prevalence of illegal abortions, the socio-economic profile of the women seeking abortions, and the factors responsible for illegal abortions (abortion performed outside the conditions of the Act). The Survey conducted in rural areas of Uttar Pradesh, Rajasthan, Haryana, Orissa and Tamil Nadu during 1983 – 1985, however, grossly underestimated the incidence of spontaneous and induced abortions. For the five states combined, the induced abortion rate was 1.9 per 100 pregnancies and that for Haryana was 1.2. These figures are gross underestimates of the ground realities.

In an intensive study on sex selective abortions in rural Haryana, George and Dahiya et. al. (1998) concluded that parents tend to be calculative in choosing the sex of the next child and the decision is based on the birth order, sex sequence of previous children and the number of sons. Study also concluded that SRB of children born in last five years in 6 villages of Rohtak district in Haryana are masculine, including first order birth. SRB kept an increasing trend over the last 5 years.

The NFHS-1 collected data on stillbirths and spontaneous and induced abortions on a retrospective basis and as such these were subject to error due to recall lapse. The survey report (NFHS-1, 1995a) acknowledges that "Reports of induced abortions may be suppressed by respondents, or induced abortions may be reported as spontaneous abortions, so that the actual incidence of induced abortions may be much higher than is reported". Thus, the reported level of 5.8 per cent of pregnancies ending in abortions (4.5 per cent spontaneous and 1.3 per cent induced) at all India level may be a gross underestimate. For Haryana and Punjab the estimates of abortion rate at 8 per cent (6.5 per cent spontaneous and 1.5 per cent induced) and 4.8 per cent (3.1 per cent spontaneous and 1.7 per cent induced) respectively, are also underestimates. Though grossly underestimated, the abortion rates show higher prevalence of abortions in urban than in rural areas.

Data on number of abortions for India, Haryana and Punjab for selected years available from Family Planning Yearbooks published by the Ministry of Health and Family Welfare, Government of India are summarized in Table 2. These cover the MTPs carried out at government and certified private facilities. At all India level these MTPs form about 2.4 to 2.5 per cent of the estimated number of births in respective years (Kanitkar and Radkar, 2000). Table 2 also shows that Haryana which has only about 1.8 per cent of India's female population aged 15-49 years recorded 3 per cent to 4 per cent of MTPs. The comparative figures for Punjab are 2.4, 2.4 and 3.2 per cents respectively. This

shows greater incidence of legal abortions in Haryana and Punjab in comparison to national average. It is quite possible that the incidence of illegal abortions in these two states may also be at a rate higher than the national average. This assertion is supported by evidence of strong preference for sons and discrimination against girls in these two states.

It is common knowledge that majority of private facilities do not report regularly regarding the number of MTPs performed by them. As such the data available from Family Planning Yearbooks give a grossly under-reported picture of induced abortion in India and its various states. These have been shown to suffer from under-estimation because a large number of abortions in India even today take place outside the legal system. Researchers have different estimates of unreported abortions (Kanitkar and Radkar , 2000). At the lower side, unreported abortions have been put at 40 to 50 per cent of legal abortions. The ratio of illegal to legal abortions, on the higher side, has been put at 3 to 1 in rural areas, 4 or 5 to 1 in urban areas or even as high as 8 to 1 in total. Based on the Shah Committee' assumptions of 15 induced abortions for every 73 births, Chhabra estimated that in 1991 there were 6.7 million induced abortions in India, or 10-11 illegal abortions for every legal MTP.

The Shah Committee's estimates based on small scale hospital studies carried out in the late sixties were found consistent with findings of several international and national studies, which respectively showed that about one quarter of all pregnancies ended in abortion and the ratio of abortion to obstetric cases was 1:4. It has also been noted that enormous differences between the number of abortions done in the legal system and those actually occurring are possible (Chhabra, 1996). It may be pointed out here that the Shah Committee's observations were made on the basis of data almost three decades ago when contraceptive prevalence in India was negligible. Because of positive relationship between the prevalence of non-terminal contraceptive use (especially traditional methods) and the incidence of induced abortions, there is a possibility of increase, over time, in the incidence of induced abortion in India. This is likely to increase the overall and induced abortion rates in the country. The incidence of spontaneous abortions might have remained at the same level as that estimated by the Committee but that of induced abortion might have gone up from 15 per 100 pregnancies or per 73 live births. This contention is supported by a recent study that gives the ratio of induced abortion to 100 live births in India as 23 (Ross et. al., 1999).

The lack of consistency in various estimates of induced abortion has lately been aggravated further by the prevalence of small family norm, the preference for sons and the availability of technology for sex detection of the unborn child. There is reason to believe that a significant number of sex-selective abortions were performed in India Whilst there are no estimates of the total number of sex-selective abortions performed, reports suggest that the clinics have been doing a brisk trade for several years. (Das Gupta and Bhat 1997). A study of abortion and contraception in the Korean fertility transition has highlighted the importance of abortion in fertility transition. Changes in the use of contraception and abortion are especially important in countries experiencing major declines in fertility. Abortion and contraception have an important impact on the

tempo of childbearing and thus, on overall fertility and the speed of any decline in fertility. Such changes are important because they are closely associated with the subsequent pattern of family building. The fertility of women who use contraception or abortion early in their reproductive lives is lower than among those who delay the start of fertility control until later.

Table 2 : Number of MTPs (Medical Termination of Pregnancies) and percentage of MTPs in states to that in India, Haryana and Punjab, 1990-91,...,1996-97.

Year	India Number	Haryana		Punjab	
		Number	Percent	Number	Percent
(1)	(2)	(3)	(4) = (3)/(2)*100	(5)	(6) = (5)/(2)*100
1990-91	581,215	19,742	3.40	15,965	2.75
1991-92	636,456	20,073	3.15	15,436	2.43
1992-93*	606,015	18,469	3.05	18,537	3.06
1993-94	612,291	22,438	3.66	19,436	3.17
1994-95	627,748	23,700	3.78	19,849	3.16
1995-96	566,451	23,024	4.06	17,510	3.09
1996-97	465,705	22,751	4.88	16,895	3.63

Note: * Represents provisional figures.
Source: Family Planning Yearbooks, Ministry of Health and Family Welfare, Government of India, different years.

Use of induced abortion increases with the number of completed pregnancies. Abortion is more widespread among non-terminal contraceptive users than among women who have never practiced family planning. The reason probably lies in the fact that women who use contraception do not want to become pregnant, and are more likely than non-contraceptive users to terminate a pregnancy. Previous research has shown that women who use contraception are more likely to have an abortion than those who do not (Tietze and Henshaw, 1986) . The pattern of induced abortion among pregnancies immediately following the first abortion is very different from that for contraception. In both groups of women, those who experience first abortion late in the reproductive cycle are more likely to use abortion in the subsequent pregnancy than those who experience first induced abortion early. Abortions in later pregnancies (e.g. pregnancies that occur after bearing the desired number of children) tend to be used for limiting rather than for spacing the children borne. Therefore, the pregnancies that occur after later abortions are less likely to be wanted than those that follow early first abortions (many of which may represent more successful spacing of desired additional births).

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Further, a study of alternative contraceptive methods and fertility decline in India based on NFHS-1 data, shows that sterilization as a contraceptive though practiced by three-quarters of all users, did not have much prospect for reducing the level of fertility below the recorded level of 3.4 in 1992-93. Since the birth intervals in populations with varying levels of fertility and extent of contraceptive use have shown a stable level of about 2.5 years, the use of contraception other than sterilization will be for limiting rather than for spacing the births (Pathak et. al, 1998). In such situations where couples do not want sterilization and have reached the desired number of children, the contraceptive failures are likely to accelerate induced abortion. This observation and the Korean experience suggest a strong possibility for induced abortions in general and sex-selective induced abortions in particular to go up and thus play an important role in fertility decline in Haryana and Punjab. The Prenatal Diagnostic Techniques, Regulation and Prevention of Misuse Act (1994) passed by the Indian Parliament was in response to spurt in sex-selective abortions that were being carried out in the country.

3. DISCUSSION AND RESULTS

The decline in fertility can be brought about by an inter-play of several factors collectively known as proximate variables. The main purpose of this inter-play is to restrict or control the number of births that couples have. In this context, induced abortion has an important role in fertility reduction. This can be manifested through changes in several indicators such as birth interval, parity progression ratio, sex composition of children born as well as in actual decline in fertility level.

The dynamics of birth interval is extremely simple and can be used to explain fertility behaviour but is not suitable for identifying the impact of changes in its composition on the level of fertility. Parity progression ratio is a sensitive indicator of changes in family-building process which follow the adoption of contraception. It is useful in analyzing people's behavior toward having children of desired sex but not in the estimation of effect of induced abortion on fertility decline. In our study here the sex ratio at birth has been used to examine people's behaviour about having children of desired sex.

Because of deficiency in direct data, the techniques of indirect estimation were used to assess the magnitude of the impact of induced abortions on fertility decline. The indirect estimates of the sex-selective abortions were primarily obtained using the sex ratio at birth and that of total induced abortions were obtained with the help of proximate variable model of fertility developed by Bongaarts. The proximate variable model of fertility has the ability to quantify the contribution of each of the proximate variables to the level of fertility. The success of the model as a true indicator of changes in fertility, as with any other model, however, is affected by the accuracy of information used as input. The generalized model of relationship between fertility and proximate determinants of fertility considers factors classified into principal and secondary categories. The principal proximate determinants include marriage, contraception, induced abortion and postpartum infecundability. The variables in this group explain almost 96 per cent of the variation in fertility rate.

To identify the relationship between fertility decline and the practice of sex selective abortions in the selected states for the present analysis, and because of unavailability of requisite data from NFHS –1 and NFHS –2, it became imperative to use data from another source. The other source is that of the Sample Registration System (SRS) operated by the Registrar General of India.

3.1 Preference for Sons

The effects of family composition on parity progression in a number of states in India shows that women who have no sons are more likely to proceed to have an additional child than those with at least one son and the large majority of women with one child go on to have another child within the five-year period. These effects are strongest in Punjab and Haryana which are known to have strongest son preference attitudes. The rise in parity progression ratio for each family size achieved, with the number of girls in the

family, is substantial. For example, in two-child families in Punjab, the percentage of mothers going for an additional child rises from 53 for families with no girls to 81 for families with all girls. The comparative figures for Haryana, because of higher fertility are 71 and 89 respectively. Punjab and Haryana showed the highest and the second highest, among eight states considered for the analysis, rise in the ratio noted above. This shows strong desire to have second son. In general, parity progression ratio for an additional child in families dominated by sons is lower than that in families dominated by daughters. A substantial rise in the ratio for having an additional child in families with at least one boy to that with all girls implies strong desire to have at least one son. For example, in families with three or more children, in Punjab, the ratio rises from 28 for a family with one son to 74 for a family with no sons. The comparative figure for Haryana, in families with four or more children, is from 48 to 90.

The preference for sons is also brought out by the sex ratio at birth (SRB). The sex ratio at birth defined as the number of male per 100 female births is largely determined by sex ratio at conception and sex differences in mortality between conception and birth. The birth statistics from a number of countries throughout the world with reliable data show an excess of male over female births. The sex ratio at birth in India under normal conditions affecting birth of children, may be assumed to be around 106. A rise in this ratio will imply discrimination against girls at birth. There is a general agreement that abnormal changes in SRB reflect impact of social practices and not natural biological processes. This social practice is largely related to the practice of sex-selective abortion by couples. In Haryana and Punjab, where preference for sons is quite strong, the prevalence and motivation for small family norm is likely to encourage couples to resort to sex-selective abortion to achieve the desired number of sons within the frame of limited family size. This is reflected in the rise of the sex ratio at birth in these two states as described below.

The analysis of distribution of recent births during three-years preceding the NFHS-1 by sex and by order of birth and age of the woman at birth and residence shows somewhat greater preference for sons in Punjab (SRB=117) than Haryana (SRB=112). Preference is greater in urban than in rural areas with Punjab showing a greater differential than Haryana. Both the states show a rise in the intensity of preference for sons with rise in age of women and order of birth of the child. The preference to have the first son is substantially stronger in Punjab (SRB=131) than in Haryana (SRB=109). Preference for sons in the case of Punjab is more in urban than in rural areas. This preference in the case of Haryana is limited largely to 2nd order births; for larger families, particularly those with three children, rural areas show greater preference for sons than urban areas.

The analysis of two consecutive latest births from NFHS-1 reveals that preference for a male child following the birth of a female child is quite strong both in Haryana (SRB =151) and Punjab (SRB=154). It is also high following the birth of a male child in Haryana (SRB=120) but not in Punjab (SRB=98). With the exception of urban areas in Punjab, preference for sons in Haryana was greater than that in Punjab. The preference is reflected in the rise of SRB with increase in the mean duration of birth interval. For example, in Haryana, the SRB rises from 112 for birth interval less than 24 months to 207

for birth interval 36 or more months. The comparative figures for Punjab were 134 and 187 respectively.

In the case of Haryana, the sex selection against girls appears to operate significantly in families of four or more children and for births occurring after 24 months, with increasing trend in this practice as birth intervals rise. The practice increases with increasing family size. The overall practice of sex selection at birth in Punjab is more intense and wide spread than that in Haryana.

Further, Haryana shows preference for sons as well as discrimination against daughters whereas Punjab shows only the preference for sons but no discrimination against daughters. This is confirmed by difference between observed and expected percentages of sex composition of two consecutive births in five years preceding NFHS-1. The observed percentage of all two-consecutive-births where male child followed the female was about 32 in Haryana and 30 in Punjab as compared to expected value of only 25. This shows preference for sons following the birth of a daughter in both the states. By contrast, the observed percentage of female births following the male in Haryana was 22 as compared to expected value of 25. The expected and observed percentages for Punjab were about the same.

3.2 Sex-Selective Abortions and Fertility

Sex-Selective Abortions: Table 3 presents annual estimates of sex-selective abortions and related measures in Haryana and Punjab and its rural and urban areas in 1990-92 and 1996-98. These estimates use the Index of Sex Discrimination at Birth (ISDB)[1] derived from data given by the Sample Registration System (SRS) and the births estimated from data given by NFHS-1 and the population projection prepared by the Registrar General of India. It may be obtained from Table 3 that the sex-selective induced abortions in Haryana declined by about 10 per cent, from 69,000 to 62,000 during the period 1990-92 to 1996-98. A similar decline may be obtained for Punjab where abortions in the two periods were 57,000 and 51,000. However, in relation to 100 live births, the decline in Haryana was one-half of that in Punjab, the respective declines were from 12.2 to 11.5 and from 11 to 9.6. In relation to 1000 females of reproductive ages, about 18 and 15 had sex-selective abortions in Haryana in 1990-92 and 1996-98 respectively. The comparative figures for Punjab were about 12 and 9.

[1] It measures deficit in number of girls at birth wrt to an expected ratioof 100 females per 100 male births.Negative value denote a shortfall, while positive values denote the opposite.

Table3: Sex-selective abortions and total fertility rate per female (TFR) by area, Haryana and Punjab, 1990-92 and 1996-98

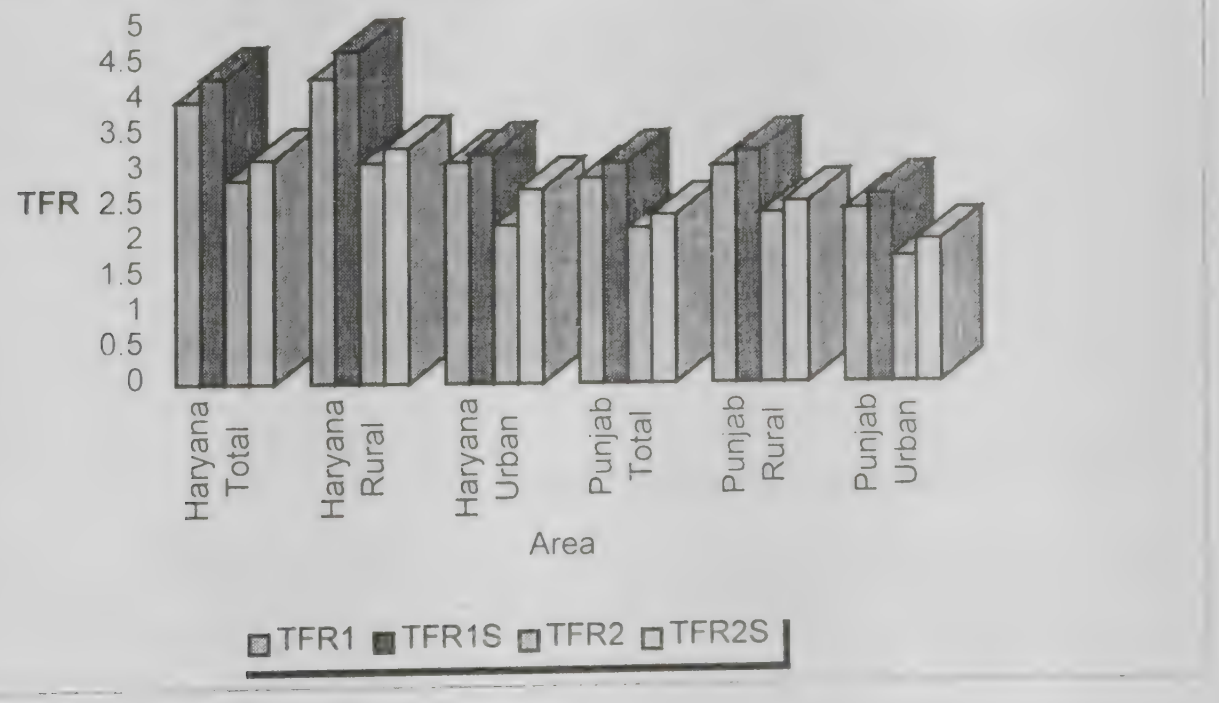
		HARYANA			PUNJAB		
		Total	Rural	Urban	Total	Rural	Urban
Total Fertility Rate							
	1990-92	3.99	4.32	3.14	2.92	3.09	2.48
	1996-98	2.88	3.13	2.25	2.21	2.42	1.79
Number of sex-selective abortions							
	1990-92	68,586	62,335	6,250	57,409	40,711	16,697
	1996-98	61,907	33,939	27,968	51,203	31,585	19,618
Sex-selective abortions per 100 live births							
	1990-92	12.2	13.9	5.5	11.0	10.4	12.7
	1996-98	11.5	8.0	23.4	9.6	7.9	14.6
TFR if there were no sex-selective abortions							
	1990-92	4.32	4.71	3.26	3.14	3.31	2.69
	1996-98	3.17	3.34	2.76	2.40	2.58	2.03
Per cent increase in TFR if there were no sex-selective abortions							
	1990-92	8.2	9.1	3.8	7.5	7.2	8.5
	1996-98	10.0	6.7	22.7	8.5	6.8	12.4
Ratio of fertility inhibiting effect of sex-selective abortions to total induced abortions							
	1990-92	69.9	86.1	19.2	45.5	57.7	35.8
	1996-98	81.8	78.2	67.6	31.9	30.2	29.8

The sex discriminatory abortions in rural areas of Haryana declined substantially (45 per cent) from 62.000 to 34,000 possibly because of rise in the use of sterilization from 37 per cent to 45 per cent of the currently married females. By contrast, decline in rural areas of Punjab was about 22 per cent from 41,000 to 32,000. Urban areas of each state showed the opposite trend. Urban areas of Haryana experienced a five-fold increase in the incidence of sex-selective abortions as compared to a rise of only 18 per cent for Punjab. Sex-selective abortions in urban areas of Haryana went up from about 6,000 in 1990-92 to about 28.000 in 1996-98. The rise in Punjab was from 17.000 to 20,000.

Sex-Selective Abortions and Total Fertility Rate: It is well known that induced abortion, irrespective of the fact whether sex-selective or not, lowers the level of fertility rate experienced by females by the end of their reproductive period.

It has been noted above that the incidence of sex-selective abortions in Haryana and Punjab declined, both in absolute and relative numbers, over the period 1990-92 to 1996-98. However, Table 3 reveals that the relative impact of sex-selective abortions, because of decline in total fertility rate, increased over the time period considered here. For example, the overall impact of sex-selective abortions in Haryana and Punjab during 1990-92, at about 8 per cent in each, was somewhat lower than that during 1996-98, at 10 per cent in Haryana and 9 per cent in Punjab. If there were no sex-selective abortions in Haryana, the overall TFR in 1990-92 would have been 4.3 instead of 4.0. The comparative TFRs for Punjab are 3.1 and 2.9. For 1996-98, the TFR in Haryana would have been 3.2 instead of 2.9 and that in Punjab would have been 2.4 instead of 2.2. The total fertility rates given by NFHS and that estimated in the absence of sex-selective abortions are graphically compared in Figure 2.

Figure 2: Total fertility rate per female reported by NFHS-1 (TFR1) and NFHS-2 (TFR2) and that estimated in the absence of sex-selective abortions (TFR1S) and (TFR2S), by area, Haryana and Punjab.



Between 1990-92 and 1996-98, the rural areas of Haryana show a decline in the relative impact of sex-selective abortions on TFR whereas Punjab shows almost similar level. During the period urban areas show the reverse. The urban areas in 1996-98 show substantial increase and high relative impact of sex-selective abortions on TFR compared to increase in 1990-92. In the case of Haryana the increase was from 4 per cent to 23 per cent and that in Punjab was from 9 per cent to 13 per cent. The impact for rural areas was limited to 7 per cent to 9 per cent. Of all the areas and periods, urban areas of Haryana in 1996-98 show the largest impact of sex-selective abortions. The TFR in urban

areas of Haryana in 1996-98 would have been 2.8 instead of 2.3 if there were no sex-selective abortions.

It is surprising that during 1990-92, rural areas of Haryana show greater relative impact of sex-selective abortions on TFR than urban areas (9 per cent and 4 per cent, respectively). The reverse is noted for Punjab (7 per cent and 9 per cent). During 1996-98 the pattern of differential in Haryana reversed with a wide margin, 7 per cent for rural and 23 per cent for urban. In the case of Punjab, the pattern of differential remained unchanged but the margin increased from 7 per cent to 13 per cent.

Sex-Selective Abortion in Relation to Total Induced Abortion: Table 3 further brings out the role of sex-selective abortions as compared to total abortions in determining the level of fertility. It may be noted that in the case of Haryana sex-selective abortion in relation to total induced abortion played much more potent role in fertility inhibition than in Punjab. Almost 70-80 per cent of fertility inhibitions in Haryana assignable to induced abortions are accounted for by sex- selective abortions. The figures for Punjab are much lower than that for Haryana. In the case of Punjab in 1990-92 sex-selective abortions accounted for about 46 per cent of the fertility inhibiting impact of induced abortions. This declined to about 32 per cent in 1996-98. Thus, while Haryana registered a rise in importance of sex-selective abortions in fertility inhibition over the periods considered, Punjab registered a decline. This is because females in Haryana were largely sex-selective in undergoing abortions whereas those in Punjab (almost 70 per cent of abortions) did not differentiate much between sexes. By and large rural areas show greater preference for sex-selective abortions than urban areas with Haryana showing much wider differential than Punjab. During the interval 1990-92 to 1996-98 rural areas of Haryana and Punjab showed a decline in the share of sex-selective abortions in total, Haryana showing a lower relative decline than Punjab. Only the urban areas of Haryana show a substantial rise in the share of sex- selective abortions to total. The share of sex-selective abortions to total abortions as a factor contributing to fertility level in urban areas of Haryana increased from about 19 per cent in 1990-92 to about 68 per cent in 1996-98.

3.3: Total Induced Abortions and Fertility

Incidence of Induced Abortions: The estimate of induced abortions and its relation to fertility is presented in Table 4. It may be noted that the annual number of induced abortions in Punjab and Haryana in 1996-98 were about 194,000 and 77,000 respectively. Between 1990-92 and 1996-98, Punjab experienced an increase in the number of abortions whereas Haryana experienced the opposite. The decline in the number of induced abortions in Haryana was concentrated in rural areas presumably because of rise in the use of sterilization. Urban areas of Haryana and rural and urban areas of Punjab experienced the opposite. The large increase in the number of induced abortions in Punjab is likely the effect of the shift from sterilization to condoms in the use of contraceptive.

In relation to 100 live births, the abortion ratio in Haryana declined from about 18 in 1990-92 to 14 in 1996-98. But during the same period it increased from 26 to 37 in Punjab. The ratio in rural areas of Haryana declined by about 6 points from 15 to 9 but in the rural areas of Punjab it increased by about 7 points from 20 to 27. The increase in the ratio for urban areas in Haryana was marginal, about 2 points from 31 to 33. By contrast, it was substantial in Punjab at 18 points from 45 to 63.

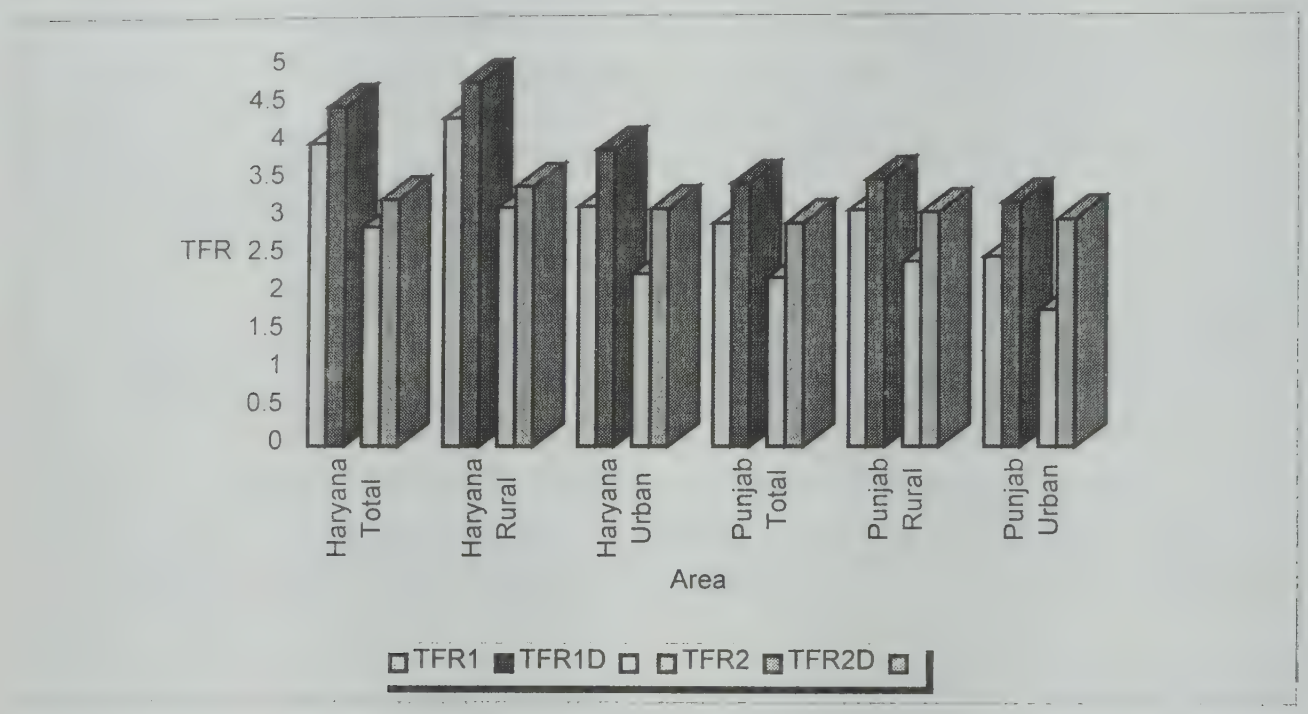
Table 4: Induced abortions and total fertility rate per female (TFR) by area, Haryana and Punjab, 1990-92 and 1996-98.

		HARYANA			PUNJAB		
		Total	Rural	Urban	Total	Rural	Urban
Total Fertility Rate							
	1990-92	3.99	4.32	3.14	2.92	3.09	2.48
	1996-98	2.88	3.13	2.25	2.21	2.42	1.79
Number of total induced abortions							
	1990-92	100,960	66,161	34,799	136,995	78,073	58,922
	1996-98	76,927	35,576	39,351	194,490	109,379	85,112
Total induced abortions per 100 live births							
	1990-92	17.9	14.7	30.9	26.2	19.9	44.9
	1996-98	14.3	9.0	33.2	36.5	27.4	63.3
TFR if there were no induced abortions							
	1990-92	4.47	4.78	3.89	3.44	3.49	3.19
	1996-98	3.24	3.41	3.11	2.92	3.06	2.97
Per cent increase in TFR if there were no induced abortions							
	1990-92	12.0	10.7	23.8	17.8	13.0	28.6
	1996-98	12.4	8.8	38.0	32.3	26.6	66.0
Per cent of decline in TFR during 1990-92 and 1996-98 explained by total abortion							
		1.3	-6.4	36.5	44.9	49.6	80.9

Total Abortion and Level of Fertility: Table 4 and Figure 3 present the impact of induced abortions on total fertility rate. It may be noted from Table 4 that the relative impact of total abortion on TFR in Haryana remained similar at about 12 per cent in 1990-92 and 1996-98. However, in the case of Punjab it showed a substantial rise from a high level of 18 per cent in 1990-92 to 32 per cent in 1996-98. The TFR in Haryana in

1996-98 would have been 3.2 instead of 2.9 if there were no abortions. The gain in TFR in the absence of abortions in Punjab in 1996-98 would have been quite substantial from 2.2 to 2.9. The observed and expected values of TFR in the absence of abortions are compared in Figure 3.

Figure 3: Total fertility rate per female reported by NFHS-1 (TFR1) and NFHS-2 (TFR2) and the corresponding estimated rate in the absence of total induced abortions TFR1E and TFR2E, by area, Haryana and Punjab.

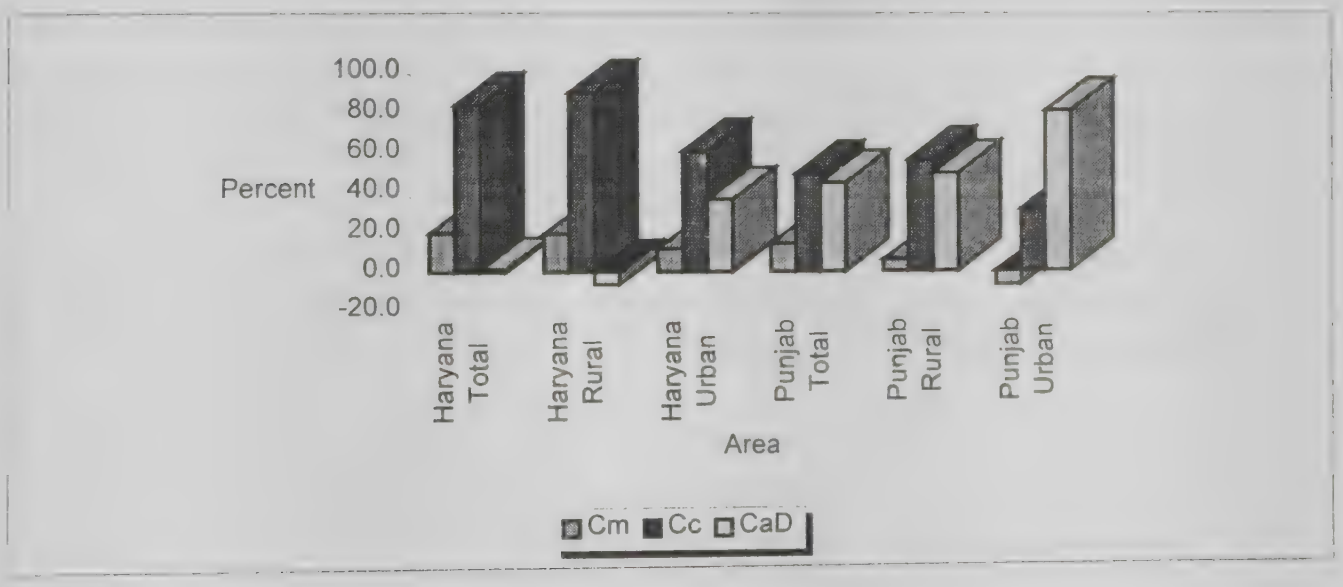


Relative impact of total abortion on TFR in rural areas is much lower than that in urban areas of each state. Also, its level in Haryana is lower than that in Punjab, the gap in 1990-92 being much lower than that in 1996-98. The impact in rural areas of Haryana in 1990-92 at about 11 per cent was slightly greater than that in 1996-98 at about 9 per cent. The comparative figures for Punjab are 13 per cent and 27 per cent. During 1990-92 urban areas of Haryana and Punjab did not show much differential in relative impact (24 per cent and 29 per cent) but during 1996-98, the differential was much wider (38 per cent and 66 per cent). The TFR in 1996-98 in urban areas of Haryana in the absence of abortions would have been 3.1 instead of 2.3, a difference of 0.8. On the other hand the TFR in urban areas of Punjab in during 1996-98 would have been 3.0 instead of 1.8, a difference of 1.2 births per female.

Total Abortion and Fertility Decline: Table 4 (last row) shows that in Haryana, with the exception of urban areas, the contribution of induced abortion in fertility decline between 1990-92 and 1996-98 is almost negligible, in fact in rural areas its impact is to slightly increase the TFR. By contrast, in urban areas of Haryana, induced abortion accounted for about one-third of decline in TFR. The picture in Punjab is very different.

Almost 45 per cent of decline in TFR is assigned to induced abortion: about 50 per cent in rural and 80 per cent in urban areas. There is a slight inconsistency in data for Punjab. The estimated contribution of induced abortion to decline in fertility in Punjab is not bounded by the estimates for rural and urban areas. The inconsistency can not be assigned to computation problems. It appears that the decline in TFR as estimated from data is slightly out of tune with factors that cause the decline. This could be the result of slight under estimation of TFR in 1996-98 or overestimation of TFR in 1990-92 or both. The error of estimation is not expected to be large to cause any concern for drawing meaningful conclusions. We can safely conclude that the practice_of induced abortion played an important role in fertility decline in urban areas of Haryana and rural as well as urban areas of Punjab. Figure 4 presents the comparative picture of the contribution of marriage, contraceptive use and induced abortions in fertility decline between 1990-92 and 1996-98 in Haryana and Punjab.

Figure 4: Decomposition of decline in total fertility rate between 1990-92 and 1996-98 due to marriage (Cm), contraception (Cc) and abortion (Ca), (percent), by area, Haryana and Punjab. (NFHS I & NFHS II).



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4. POLICY IMPLICATIONS[2]

4.1 Background

Sex-selective as well as non-selective induced abortion is attempted in case a pregnancy is considered "unwanted". The situation which determines the unwanted nature of pregnancy may vary from individual to individual and may include one or more of the following: illegitimacy, rape, ill health of the mother, contraceptive failure, unwanted sex of the child to be born. Individual choices/preferences; perceptions of social norms and practices, economic necessities, religious requirements; easy access to services; legal environment; etc may govern these situations, in turn. Most of the decisions that affect the classification of a pregnancy into "unwanted" category are governed primarily by self-interest and are taken at micro level involving couples and/or families and private service providers. The desire to achieve a small completed family size and preference for children of a particular sex are assumed to have caused a rise in the number of unwanted pregnancies in recent past and thereby in the number of induced abortions. This situation caused the extensive practice of induced abortion both sex-selective and non-selective in Haryana and Punjab. Son preference is considered the main reason for sex-selective abortions in these two states. One or more of the following reasons occasions this preference.

- High demand for dowry at the time of daughter's wedding
- Violence against women for not bearing a male child
- Desire to have male heir to manage private corporate family businesses
- Desire to have son to perform religious rites
- Desire for continuation of family lineage

The use of induced abortions, to limit family size under certain conditions including contraceptive failure, as a back up to quality Family Welfare program is legally allowed in India. By contrast, the practice of sex-selective induced abortion following a prenatal sex determination is illegal. The practice of induced abortion of either type by a sizeable number of couples in a population has several, mostly serious, implications. The non-selective induced abortion no doubt lowers the level of fertility, a desirable goal to contain population growth, but it may cause much health problems particularly if carried out in unsafe conditions as it happens in an estimated 80 to 90 per cent of the cases in India. A large number of sex-selective induced abortion as a sub-set of total induced

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[2] The present section is based on the deliberations of a meeting convened by UNFPA Office in India on 12th March 2001. The meeting, attended by selected government departments and non-governmental organizations, discussed the earlier version of the report on "Fertility Decline and Sex selective abortions: The Case of Haryana and Punjab" and suggested some modifications including restructuring and expansion.

The present version takes care of the suggestions. This section has been substantially informed by the deliberations in the meeting organised.

The list of participants along with their institutional affiliation is given at the end of this section.

abortions causes gender imbalance and in the long run may lead to undesirable social economic, demographic, ethical, etc., consequences. The wide spread use of either type of abortion causes serious health problems for women in the reproductive period and may even become a set back to programs aimed at reducing maternal mortality and fertility. To discourage the use of unsafe induced abortion and to eliminate sex-selective abortions there is a strong need for implementing an effective intervention strategy. The present section suggests a framework for policy interventions in this regard and attempts to identify some of the problems/issues related to each intervention.

4.2 Framework for Interventions

At micro level the persons responsible for the incidence of abortion belong to two categories - the users (clients) and the service providers (mainly the private practitioners). Most of the considerations that influence the decisions in this context are linked to the individual behavior of these persons. At user's level, a complex mixture of perceived and/or expected benefits (economic, religious, social, etc.) influences the decision in favor of having an abortion. These perceptions/expectations when reviewed in the context of the gender of the foetus, lead to sex-selective abortions. At service provider's level, the indiscrete use of available technology, mostly by the practitioners in the private sector, makes the facility for abortion readily accessible. Therefore, any policy intervention to minimize the ill effects of selective or non-selective induced abortion must rely on achieving satisfactory shift in the prevailing behavior of clients and service providers of abortion facilities

The framework of interventions in the above context must, as a minimum, include four interdependent elements, each with specified strategy. These elements are identified as **ADVOCACY, LEGAL SYSTEM, SERVICE DELIVERY, AND RESEARCH**. The interdependence arises from the fact that out-put of one intervention may become the in-put of the remaining ones on a continuous feed back basis. For example, the advocacy package (updated periodically) may include the information on legal provisions for different types of abortions; the use effectiveness of various contraceptives to limit family size or to space the birth of children; places where safe abortion can be had in case needed; various risks associated with safe and unsafe abortion: as well as consequences of sex-selective abortions. The development process of these messages, in turn, may help in identifying the gaps and limitations of legal framework, the service delivery system, and available research findings and suggest ways to maximize the impact of interventions. The gaps and limitations thus identified will help steer the action required to make other interventions responsive to the emerging needs. Further, many issues related to abortion may require intervention at more than one level. For example, the issue of "Gender discrimination and value of girl child" will require strong advocacy intervention to be backed by pragmatic and effective legal system; counseling by service providers; and integration of research findings to dispel doubts and enhance understanding of the value of female children.

The four levels of interventions along with associated activities are specified below:

INTERVENTION	ACTIVITIES
ADVOCACY/ COMMUNICATIONS	▪ Communicating effective messages for different stakeholders to be approached through a) Interpersonal communication addressed to couples, families, service providers b) Group communication for religious leaders, media, NGOs, medical professionals etc. c) Mass communication for raising awareness on importance of girl child, illegality of sex selective procedures and legal provisions ▪ Developing networks for advocates/medical professionals/media/NGOs to take up these issues atdifferent forums
LEGAL SYSTEM	▪ Plug loop holes in the existing laws by including other procedures used for sex pre-selection and detection especially during pre- conception period ▪ Competent Authorities bestowed with the responsibility of the act are notified. ▪ Compulsory registration of all USG machines ▪ Planting "Decoy customers" to book culprits under the law ▪ Enforce mandatory reporting by the private MTP certified centres on no. of MTPs as per trimester, performed
SERVICE DELIVERY	▪ Expanding and improving the service delivery system for early and safe abortion ▪ Encouraging development of self regulatory mechanisms in private sector ▪ Display by private service providers that sex selection tests are not undertaken in this clinic.
RESEARCH	▪ Promoting qualitative research for identifying vulnerable population sub-groups and area specific factors linked with sex-selected abortions. ▪ Promoting quantitative research for assessing the impact of sex-selective abortion on various social, demographic etc., variables. ▪ Research to evaluate effectiveness of advocacy interventions.

4.3 Recommendations For Different Interventions

ADVOCACY/COMMUNICATIONS: To develop effective advocacy/communications program it is essential that interpersonal, group and mass communication messages for different levels of users and service providers must take adequate and effective cognizance of resources of the other three interventions. It should also identify the gaps and limitations of other interventions. Of the four interventions, advocacy/communications was considered most important. This is because the change in social behavior is a time consuming process and can not be brought about by legal interventions alone. A sound strategy in this respect is required for accelerated change in social behavior. This needs making people aware of the improvement in services and translate the findings of research into meaningful messages. Therefore, efforts should be made to effectively use all the information for decision making process related to sex-selective abortions, both at user as well as at service provider levels. Following list will be useful to identify important messages in communication/advocacy programmes.

- Gender discrimination and value of girl child
- Dowry harassment issues , anti dowry laws
- Violence against women for not bearing a male child
- Desire to have male heir to manage private corporate family businesses
- Desire to have son to perform religious rites
- Desire for continuation of family lineage
- Awareness of socio-demographic consequences of declining ratio of female to male births including commercialization of sex, marriage squeeze, lowering of female age at marriage, polyandry, etc
- Awareness of legal provisions related to issues linked with sex-selective induced abortion

Advocacy communications program for private service providers is necessary because they perform most of the induced abortions and almost all of the sex-selective abortions in India. This program is critical for minimizing the health-related complications suffered by women and for controlling the wide spread use of sex-selective abortions. The program may include the following issues, in addition to those listed above for users:

Issues for service providers (in addition to those listed for users)

- Counseling of couples seeking sex-selective techniques and linked abortions.
- Care in resolving the dilemma whether to provide the service of sex-selective abortion when woman is likely to be subjected to abuse/abandonment for not producing a male child.

LEGAL SYSTEM: The legal intervention must respond to emerging technological developments for pre selection of sex and also set up appropriate mechanisms for monitoring implementation of acts.

- Expansion of scope of PNDT Act to include other methods of pre-selection of sex e.g. PIGD.
- Effective implementation of MTP and PNDT Acts
- Review of inheritance laws to provide gender equity
- Effective implementation of related Acts, namely, anti-dowry, maternity benefits. etc.

SERVICE DELIVERY: The service delivery intervention in the organized sector (government and non-governmental) should expand facilities for bringing more and more abortion seekers to the safe abortion facility by effectively implementing the India's National Population Policy 2000 (NPP 2000). Increasing access for early and safe abortion services will dissuade abortion seekers to not to fall in the clutches of the illegal service providers. CME programmes for the medical professionals should also use the opportunity for highlighting the problem of sex selective abortions and consequences. Providers can voluntarily decide to have a stamp on the prescriptions imparting messages on importance of girl child , illegality of sex selective abortions etc.

RESEARCH: Since the act of sex selective abortion is carried out in absolute secrecy involving only the user and the service provider any attempt to contain/regulate it has to rely mainly on the change in behavior/attitude of users' on the one hand and that of service providers' on the other. To bring about this change it will be necessary to understand the circumstances that force couples to take this extreme measure and influence the service providers to perform the abortion. This understanding can be achieved through well-designed qualitative and quantitative researches, both primary and secondary, which ascertain the circumstances that force the users to resort to sex selective abortion and assess the facilities/services that are available for the act to be carried out. These findings then can be channeled through effective advocacy/communications programs to inform couples about effective measures first to avoid pregnancies leading to induced abortion and next to minimize the risks of abortion where needed. Some of the areas for research are identified as below:

- Assessment of legal-ethical and socio-cultural determinants of sex-selective abortion.
- Assessment of impact of sex-selective abortion on the future socio-cultural behavior including prostitution, polyandry, increased violence against women. marital rape, etc.
- Assessment of demographic impact of induced abortion as well as of sex-selective abortion on age at marriage for females, age and spatial squeeze for marriage of females, total fertility rate to achieve population stabilization

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ABBREVIATIONS

BI	Birth Interval
DSB	Differential Stopping Behaviour
GRR	Gross Reproduction Rate
IIPS	International Institute for Population Sciences
ISDB	Index of Sex Discrimination Against Girls at Birth
MTP	Medical Termination of Pregnancy
NFHS	National Family Health Survey
PNDT	Pre-Natal Diagonostic Techniques
SRB	Sex Ratio at Birth
SRS	Sample Registration System
TAS	Total Sex-Selective Abortion Rate
TFR	Total Fertility Rate

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